

In-Depth Report

Reverse Engineering Analysis

[Amazon Kindle Fire-D01400]

Dec. 2011



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Conditions & Description

◆ Description of Cost Table (SET)

	Category	Major Components
Display	Array	Array Processing Cost, Material Cost, Yield, etc
	Cell	Cell Processing Cost, Material Cost, Yield, etc
	Module	Module Processing Cost, Material Cost, Yield, etc
	Touch Screen Panel	Touch Screen, Touch Board
	Others	Etc
Mechanica	Back	Back Cover, Cushion, Screw, Films, etc
	Middle	Button, Connector Cover
	Packing	Package Box, etc
Circuit	CPU	Application Processor
	Memory	DDR, NAND Flash
	Bluetooth/WLAN	Wireless
	User Interface	MEMS Sensors
	PM / Battery	Power Source, PMIC
	Electro-Mechanical	Speaker, Antenna
	Others	Others
Etc	Cables	External Cables
	Manual	User Guide
	Others	Accessory

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Conditions & Description

◆ Description of Cost Table (Display)

Processing	Array	Glass	①	Cost of Single Back Glass Substrate by Size
		Target	②	Pixel Electrode-use Target of Array Process (Target: Al, Mo, Mo (Ti), Cu, etc. S/D, Gate electrode-use Target)
		Chemical, Others		Electrode-use target needed in array process excluding various MRO wet chemical, gas, photo mask, photo-sensitive organic chemical material, and ITO (Wet Chemical: Etchant, Stripper, Developer, Thinner, Cleaner) (Gas: NF3, SF6, SiH4, etc.) (Photo-sensitive organic chemical material: Photoresist, PAC)
		Array Yield(%)		Array Process Yield
	Cell	Color Filter	③	Cost of Single Color Filter (includes front glass substrate), In-house based
		Liquid Crystal	④	Cost of Liquid Crystal Input in Single Panel
		Polarizer	⑤	Cost of Two Sheets of Front and Back Polarizer Substrates which Pass Trough Specific Lights
		Others		Cost of other materials including a material for fixed liquid crystal molecule orientation, sealant to adhere front and back substrate, and Ag which totalizes front and back substrates
		Cell Yield(%)		Cell Process Yield
	Module	BLU	⑥	Cost of backlight unit which includes protection sheet, prism sheet, diffusion sheet, light plate guide, reflective sheet, lamp, and lamp cover
		Driver IC	⑦	Cost of IC which operates panels to Display letters or images on LCD screen
		PCB,Others	⑧	Cost of Gate PCB, Data PCB (printing circuit substrate), ACF, and Chassis used in modules
		Module Yield(%)		Module Process Yield
Operation	Labor Costs		Direct and indirect labor cost	
	Depreciation Cost		Depreciation	
	O/H,R&D		R&D and OverHead expenses	
Total Manufacturing Cost				
SG&A(5%)			Total Manufacturing Cost - Depreciation Cost	
Total Cost			Sale management cost, estimated to be 5% of the selling price	
Module Price				
Profit			Market Typical Price	

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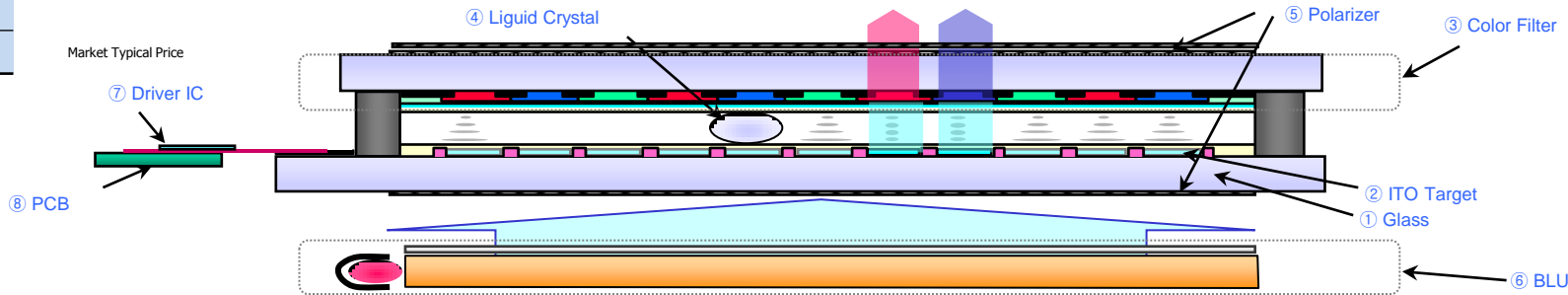
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④ Liquid Crystal

⑤ Polarizer

③ Color Filter

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Conditions & Description

◆ Description of Cost Table (Touch)

Material Cost	Front Cover Glass	Front Cover Glass is tempered glass
	Glass	Glass/Film substrate for ITO layer supporting
	Insulator	Insulator
	ITO	ITO for touch Sensor
	Touch Controller	Touch Controller located in Touch Module or Main board
	Others	Others
	Sub-Total	
Processing Cost		
Total Manufacturing Cost		
SG&A(3%)		
Total Cost		
BLU Price		
Profit		
Profit Ratio(%)		

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Conditions & Description

◆ Description of Profit Estimation Table (Tablet SET)

Category		Description
Manufacturing	Display Parts	LCD Module prices
	Circuit Parts	Sub total of Circuit
	Mechanical Parts	Mechanical cost depends on design simplicity. 1 piece cover can save cost more than 2 or 3 piece cover.
	Accessory Parts	
	Net Material Cost	Net Material Cost means total sum of net material cost
	Etc.(CKD Pack+Tax+Freight+Loss+H/C)	
	Total Material Cost	
	Manufacturing O/H	Labor/Overhead, Warranty, etc
	Total Manufacturing Cost	Total Manufacturing Cost means total cost sum right after manufacturing completed.
	Manufacturer Margin	Manufacturer Margin come from Distribution corporation to Manufacturing corporation.
	FOB	
Distribution	Freight + Insurance + Handling & Land	Insurance, Handling Charge, Land Charge
	CIF/CNF	FOB, Insurance, H/C+L/C
	Distribution O/H	
	Duty/Procedure	
Marketing	Distribution Margin	Distribution margin come from Marketing corporation to Distribution corporation
	EX-HUB	
	Marketing O/H	
	Marketing Margin	
	Net Dealer Price	
	Sales Deduction	Sales Deduction includes discount for pre purchasing on product
	Average Dealer Price	Average Dealer Price means product price for dealer

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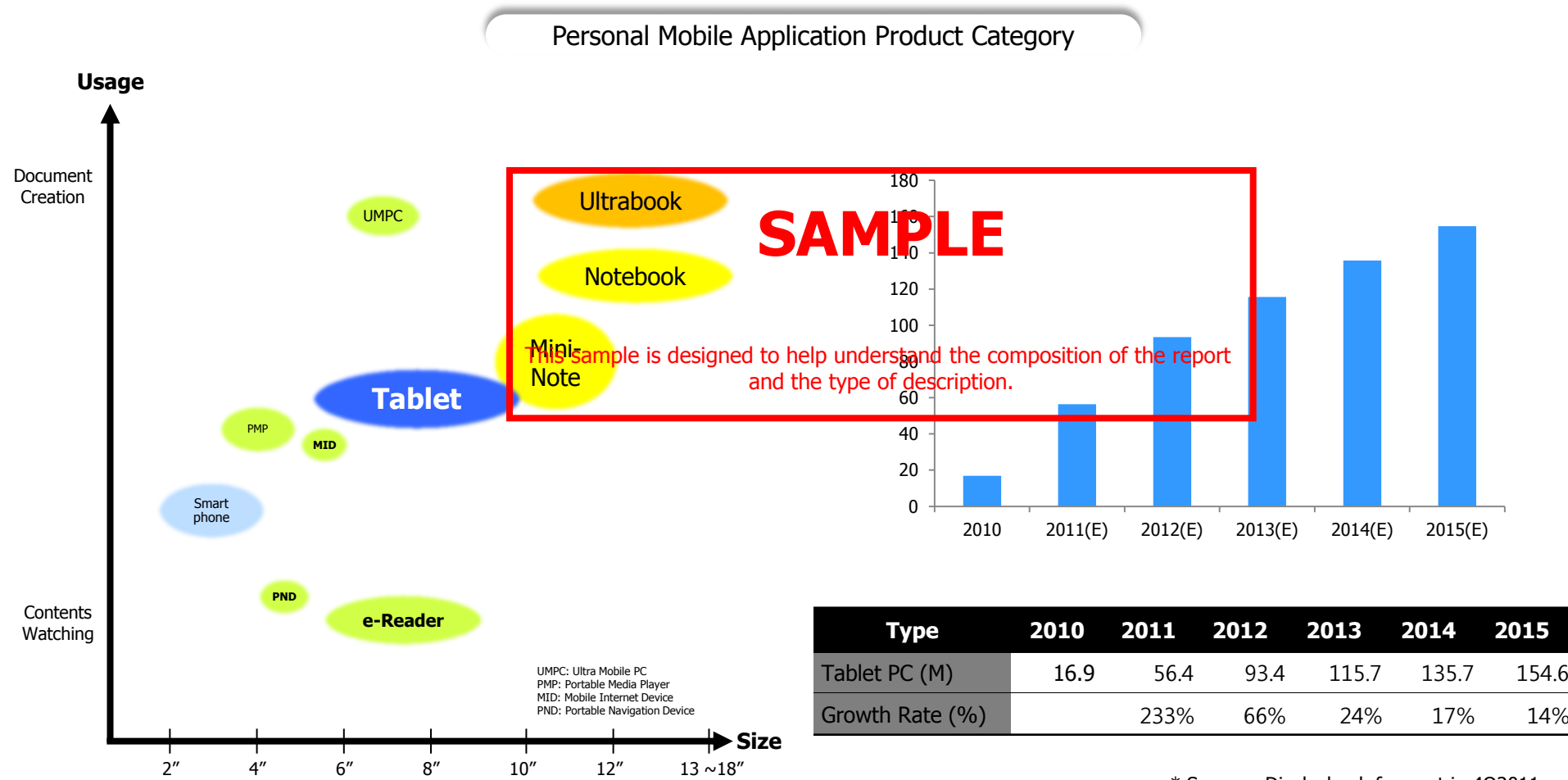
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Product Background

Product Category

- Tablet PC becomes a new application due to the advent of Apple's iPad
- Tablet PC market is expected to increase from 56.4M units in 2011 to 154.6M units in 2015







* Source : Displaybank forecast in 4Q2011

Product Background

Kindle Series Spec Comparison

- Amazon Kindle introduced 5 types of products until today, the functions of those products are limited to use only the services that Amazon provides
- Kindle Fire evolves from the product line-up focusing on e-book terminals that employing E-Ink to a table PC that is favorable to the consumption of contents of the company's own
- Employs a TFT-LCD display that can utilize video, App, and etc. from the contents focused on text and music

Classification	Item	Kindle Fire	Kindle Touch Wi-Fi / 3G	Kindle Dx	Kindle
General	Image				
	Network Type	Wi-Fi	Wi-Fi / 3G	3G	Wi-Fi
	OS	Android™ 2.3 platform (Customized)	Linux	Linux (2.6 kernel)	Linux
	Display	7", 1024 x 600 LCD, 16:9	6", 600 x 800 Resolution E-Ink Display	9.7", 1200 x 824 Resolution E-paper	6", 600 x 800 Resolution E Ink Display
	Touch Screen	Glass, Capacitive (Multi Touch)	IR Type (Multi Touch)	n/a (Keyboard)	n/a (Buttons)
	Size	7.5" (190mm) L x 4.7" (120mm) W x 0.45" (11.4mm) D	6.8" (172mm) L x 4.7" (120mm) W x 0.4" (10.1mm) D	10.4" (264mm) L x 7.2" (182mm) W x 0.38" (9.6mm) D	6.5" (165mm) L x 4.5" (114mm) W x 0.34" (8.6mm) D
	Weight	~14.6oz (~413g)	~7.5oz (~213g) / ~7.8oz (~220g)	~18.9oz (~536g)	~5.98oz (~170g)
Memory	External/Internal	8GB	4GB	4GB	2GB
Connection	Headphone Port	3.5mm Ear jack	3.5mm Ear jack	3.5mm Ear jack	3.5mm Ear jack
	Connection Port	Micro USB (USB 2.0 High-Speed)	Micro USB (USB 2.0 High-Speed)	Micro USB (USB 2.0 High-Speed)	Micro USB (USB 2.0 High-Speed)
Battery	Battery Life	8 Hours	2 Months	3 Weeks	1 Month
Other Features	Supported File	Kindle (AZW), TXT, PDF, unprotected MOBI, PRC natively; Audible (Audible Enhanced (AA, AAX)), DOC, DOCX, JPEG, GIF, PNG, BMP, non-DRM AAC, MP3, MIDI, OGG, WAV, MP4, VP8.			
	Moving Picture	Yes	No	No	No
Released date/Price	Date/USD\$	2010.11.15/\$199	2011.11.15 (\$99) / (\$149)	2010.07.07 \$489	2009.11. (\$79)

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Product Background

Product Concept

- Amazon's Kindle Fire is a tablet PC optimized to the consumption of contents of the company's own
- The performance for its price is excellent, LCD display is adopted instead of E-ink display adopted to a conventional e-book reader (LCD display is adopted to use diverse applications such as magazine/video/game, and etc. in black-and-white screen focusing on conventional E-book)
- This product is sold at lower prices than the production cost and induces to utilize the company's diverse paid contents



Kindle Fire

Main Concept

- Conventional E-ink Display is converted to LCD-based color display
 - A portable device for the consumption of contents of world's largest shopping mall and online bookstore, Amazon (extensive contents such as books, magazines, and newspapers are equipped)
 - The lowest price of the tablet products currently being sold (\$199)
 - Amazon Cloud Storage is supported free of charge
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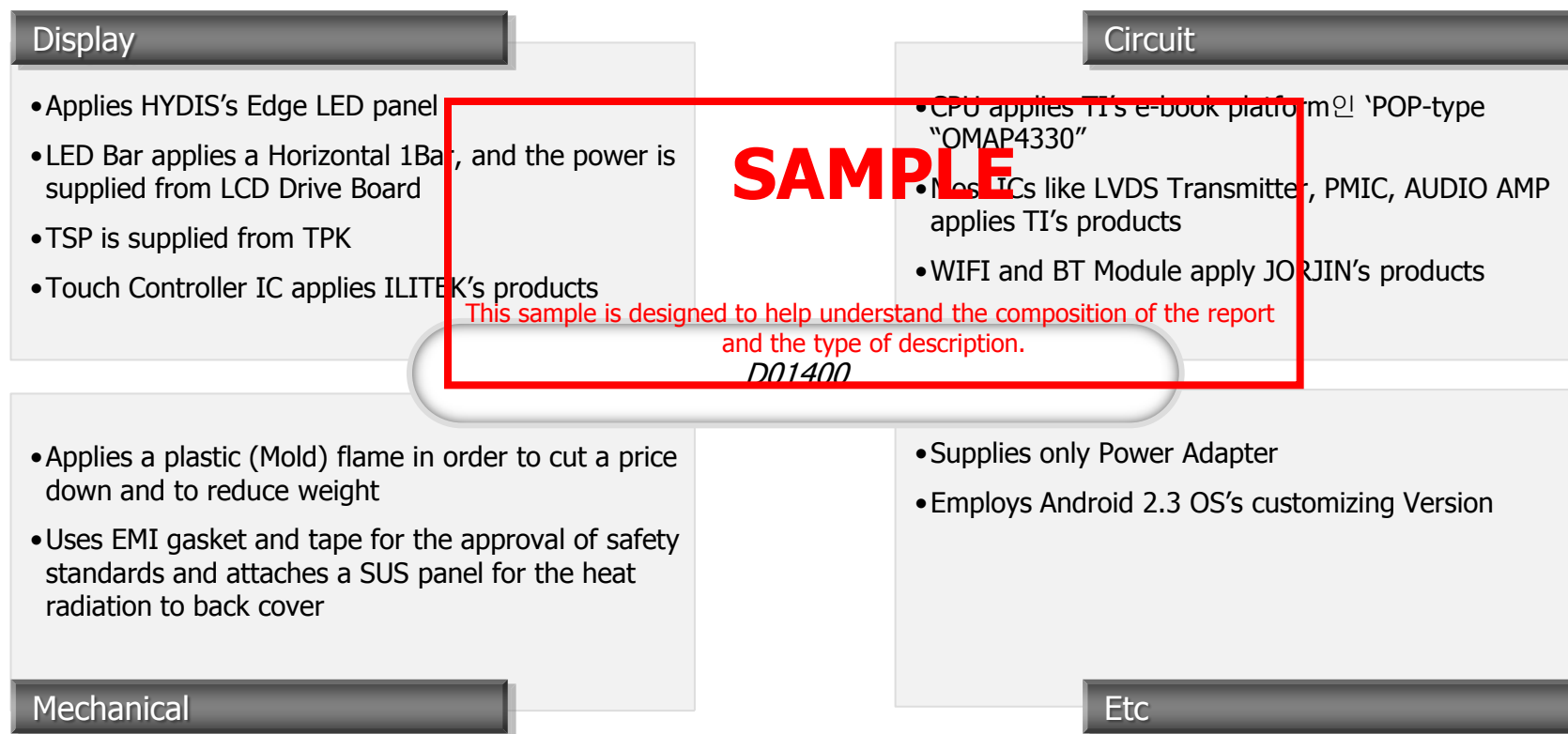
Major Technology

- LCD Display : HYDIS Panel (AFFS+ method) is employed
- Touch Screen Panel : TPK's capacitive type is applied
- Main Processor : Texas Instruments OMAP4430 is applied
- Battery : High-capacity Battery (4,400mAh) is applied

Executive Summary

Technology Review

- Applies HYDIS's LCD panel (uses either LG Display panel or BOE LCD Panel)
- Touch Screen Panel applies a TPK's capacitive type
- A tablet PC product that applied LCD display based on TI's AP and e-book platform



Executive Summary

Cost & Supply Chain

- Touch control board is attached to a touch screen panel, however, is added to display & touch part in terms of cost
- Battery is added to a circuit part

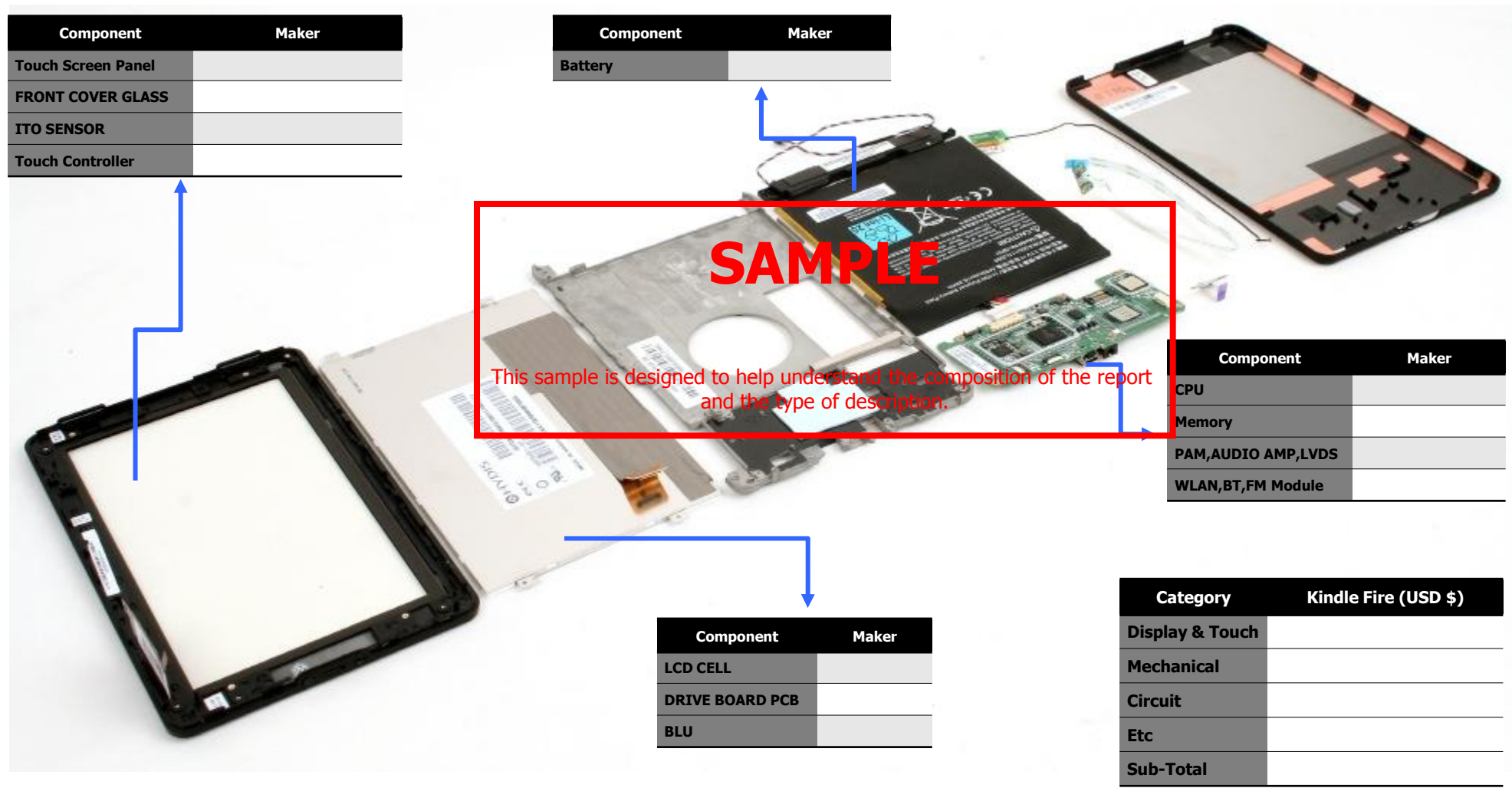


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Package Box

Box Opening Process

- Uses a standing-type box. If tearing off the dotted line on the top of the box , a tablet appears
- Quick service manual is in the top of the box, an adapter for charging is enclosed on the bottom of tablet

1



Box unpacking

2



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3



Adaptor



Quick Install Guide

4

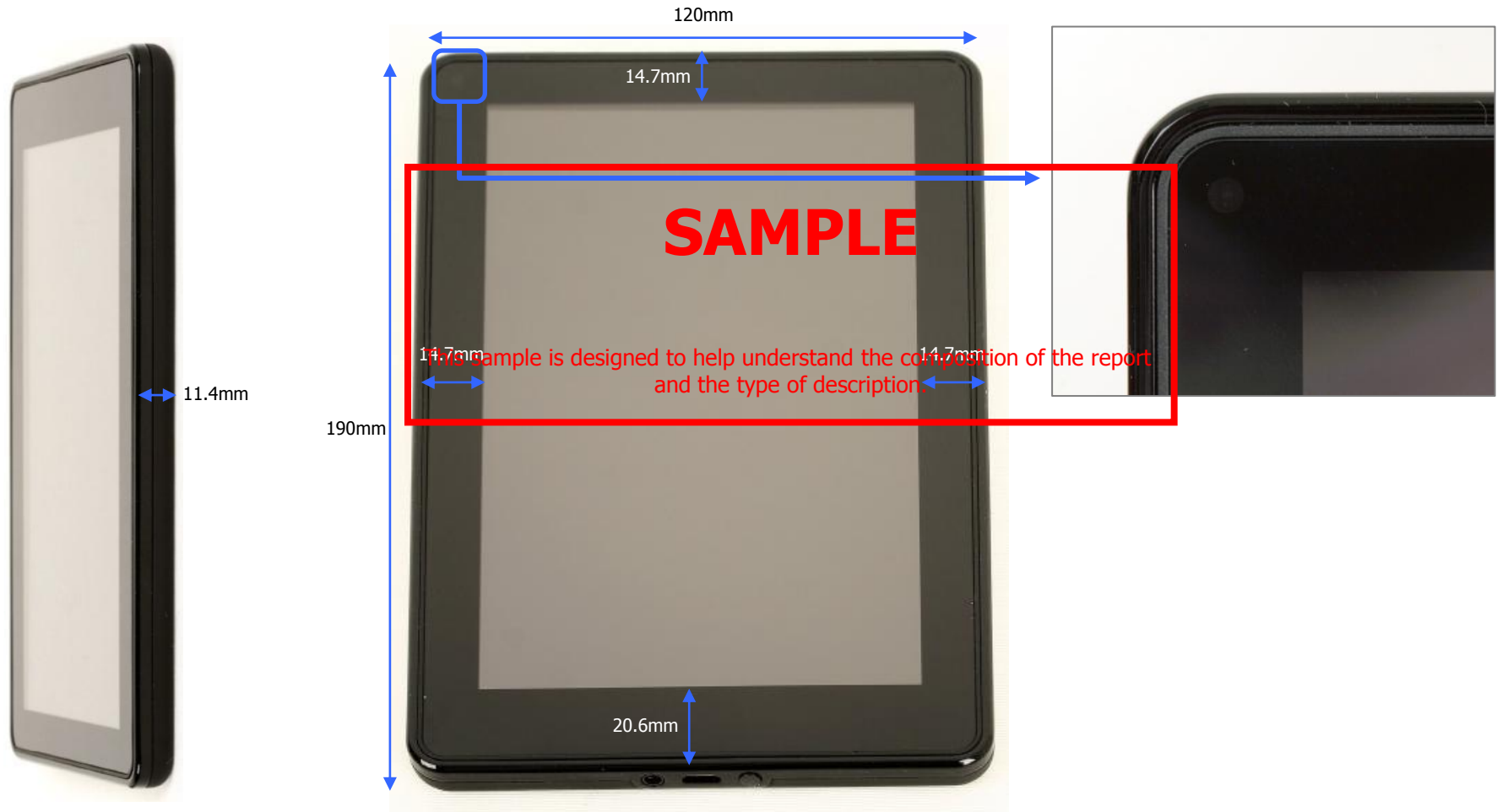


Kindle Fire

Covers

Front Cover

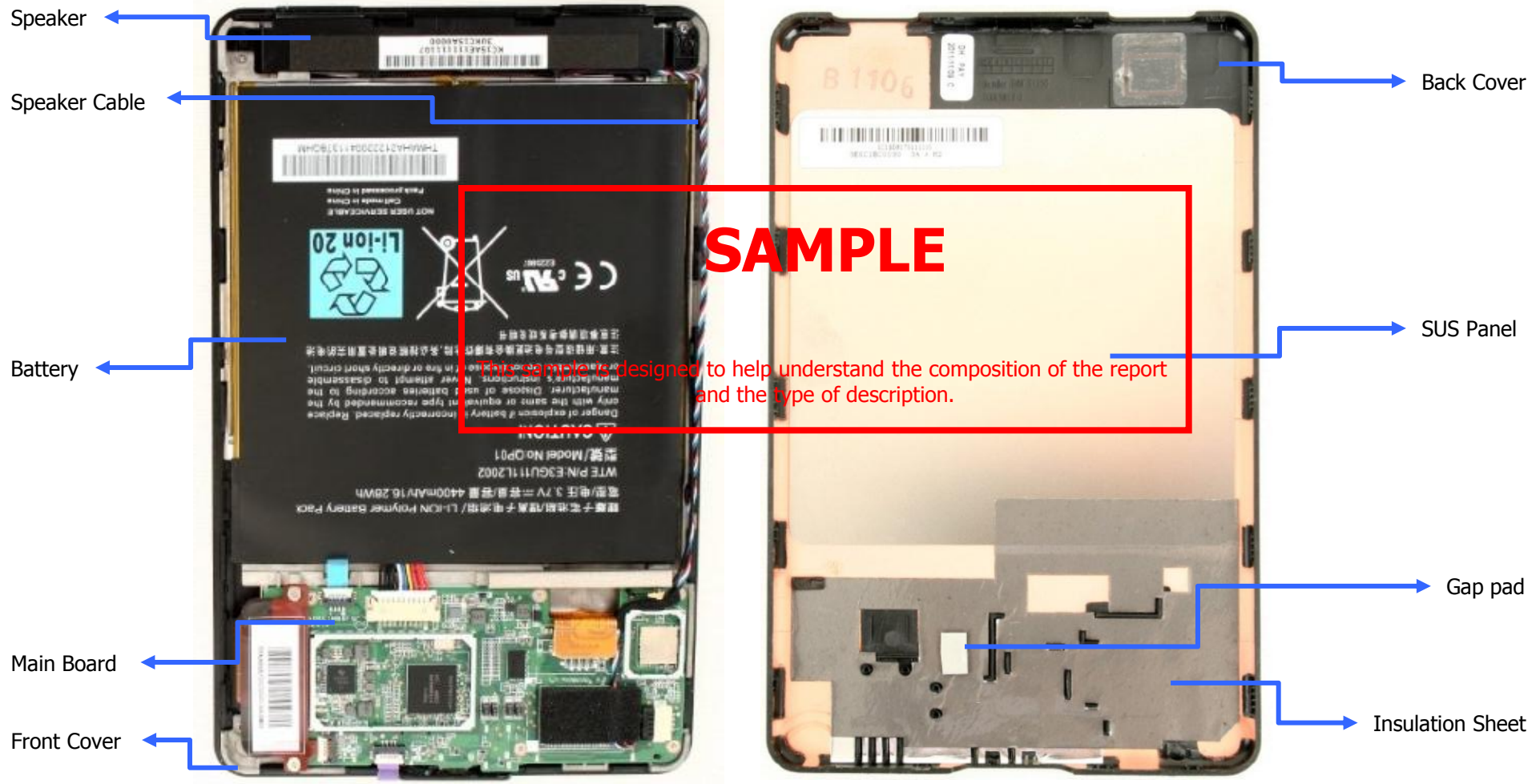
- It is a 7" product, 190mm x 120mm x 11.4mm
- Bezel thickness of top and left/ right sides are all equally 14.7mm, and that of the bottom is 20.6mm
- On the front, there is a lighting sensor on the top of left side



Covers

Back Cover Disassembly

- Separates into front cover module and back cover to lift the gap below the USB port in the bottom
- A SUS panel is attached for the heat radiation of battery on the back cover, high-capacity battery accounts for the majority



Touch Screen Panel

Touch Screen Pattern Structure

- TPK's projected capacitive type GG type (Single side ITO) is applied to a touch screen panel
- The shape of pattern is a grid structure, is uniformly distributed in the whole area

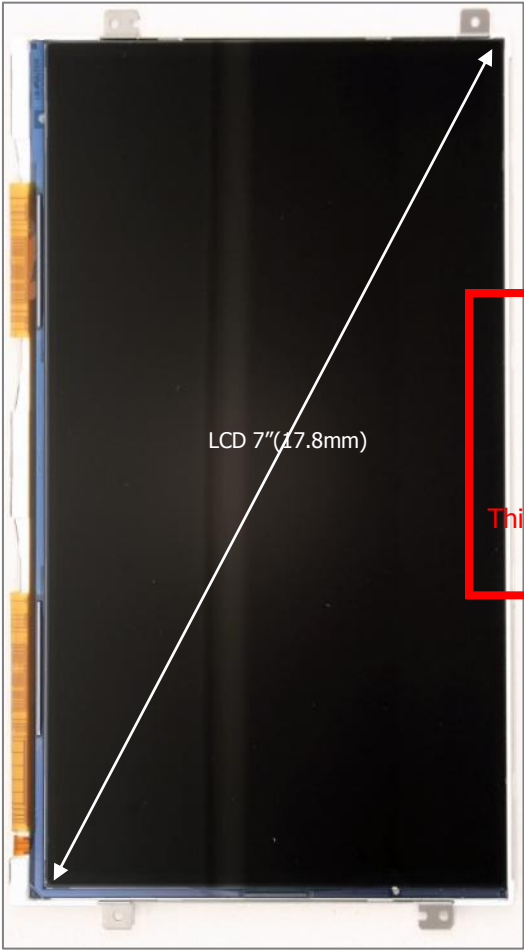


Shape of Touch Pattern

Display Module

Specification

- LCD applied to Kindle Fire is HYDIS' HV070WS1-101 panel. The specification of the panel is as below



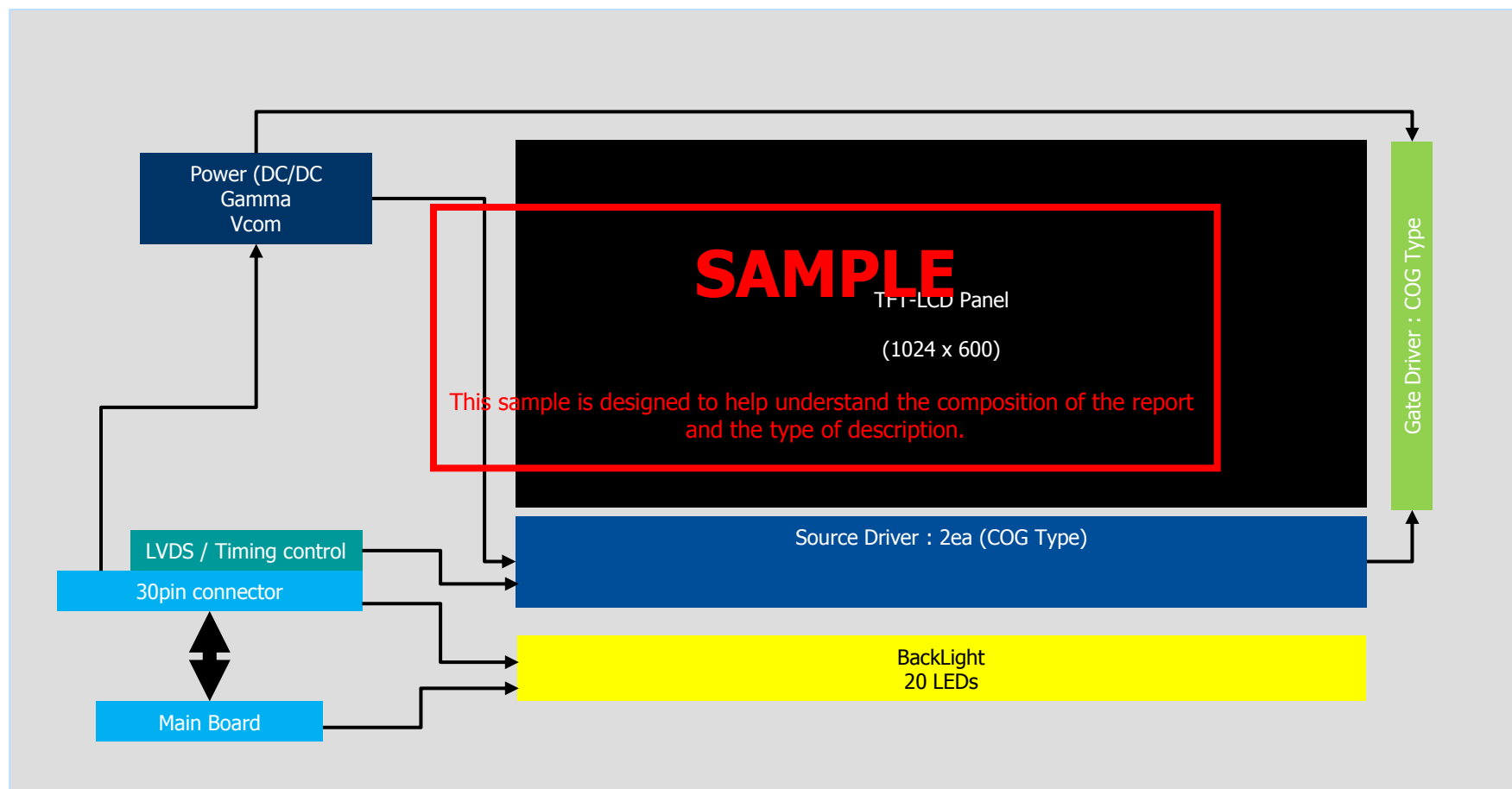
	Spec
Maker	HYDIS
Model	HV070WS1-101
Panel Type	LCD (Color TFT/ AFFS)
Display Inch	7.01"
Resolution	1024 x 600 (WSVGA)
Pixel arrange	RGB Vertical Stripe
Aspect Ratio	16 : 9
Colors	16.7 million (8-bit)
Contrast ratio	800:1 (Typ)
Brightness	400cd/m² (Typ)
LC mode	AFFS
BLU	Bottom edge side, LED type 20 LED Package (5 x 4 Array)
Depth (mm)	2,47mm
Interface	LVDS (1 Channel)

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Display Module

LCD Module Block Diagram

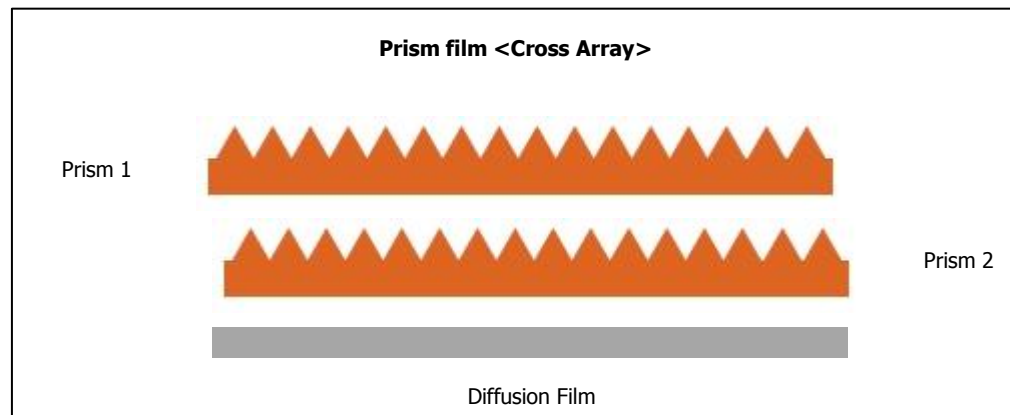
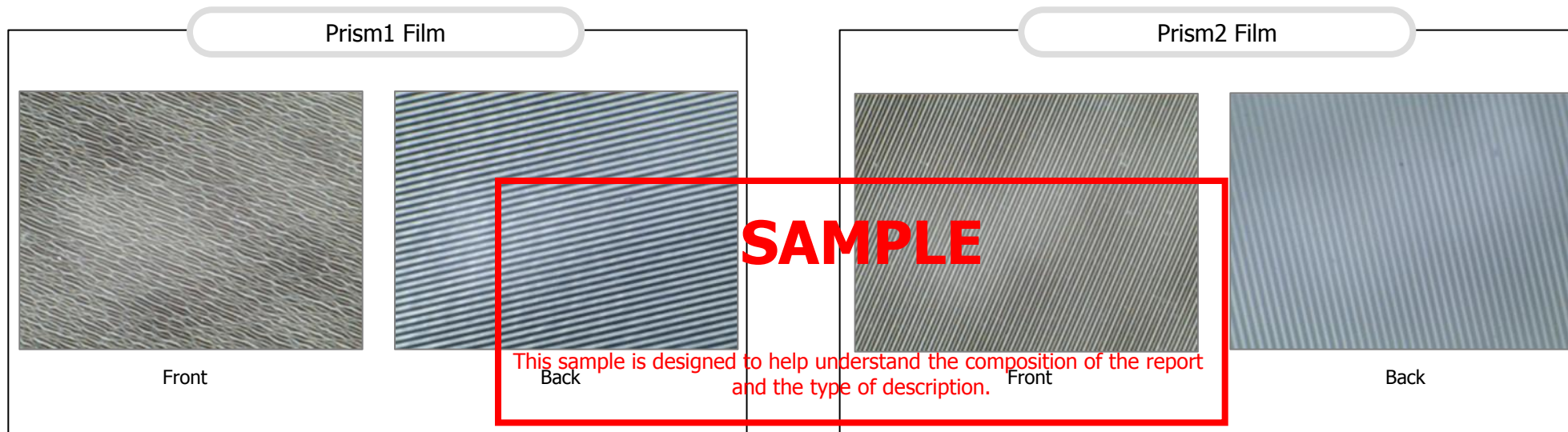
LCD Module Block diagram



Display Module

Prism Film of BLU

- Applies 2 sheets of prism films, protects the pattern of #2 prism film and prevents Moire by the Matt processing on the front of #1 Prism Film
- A grid pattern that each prism direction intersects by ± 45 degrees



Display Module

Spec. Comparison

- In terms of the LCD panels applied to Kindle Fire, provides the specifications equivalent to the ones applied to other table PCs, and uses either HYDIS or LGD panel

	Amazon Kindle Fire (HV070WS1-101)	NOOK TABLET (LD070W2(SL)(02)
Maker	HYDIS	LG Display
Size	7" diagonal with Multi-touch	7" diagonal with Multi-touch
Aspect Ratio	16:9	16:9
Panel Type	AFFS/LCD (Color TFT/AFFS/a-Si TFT)	AH-IPS/LCD (Color TFT/IPS/a-Si TFT)
Color	16.7M	16.7M
BLU	Edge type LED (Downside 1bar)/20 LED Package	Edge type LED (Downside 1bar)/20 LED Package)
Resolution	1024 x 600 (WSVGA)	1024 x 600
Contrast	800 : 1	800 : 1
Brightness	400cd/m ² (Typ)	400cd/m ² (Typ)
Pixel Pitch (mm)	0.15mm X 0.15mm	0.15mm X 0.15mm
Outline dimension	163.60(H) X 102.90(V) X 2.47(D) Active : 153.6 x 90.0	162.8(H) X 102.9(V) X 2.47(D) Active : 153.6 x 90.0
Power	Max 2.32W, (Logic:0.96W / BLU : 1.36W)	Max 2.31W (Logic : 0.95W / BLU : 1.36W)
Weight	LCD : 95g	LCD : 95g

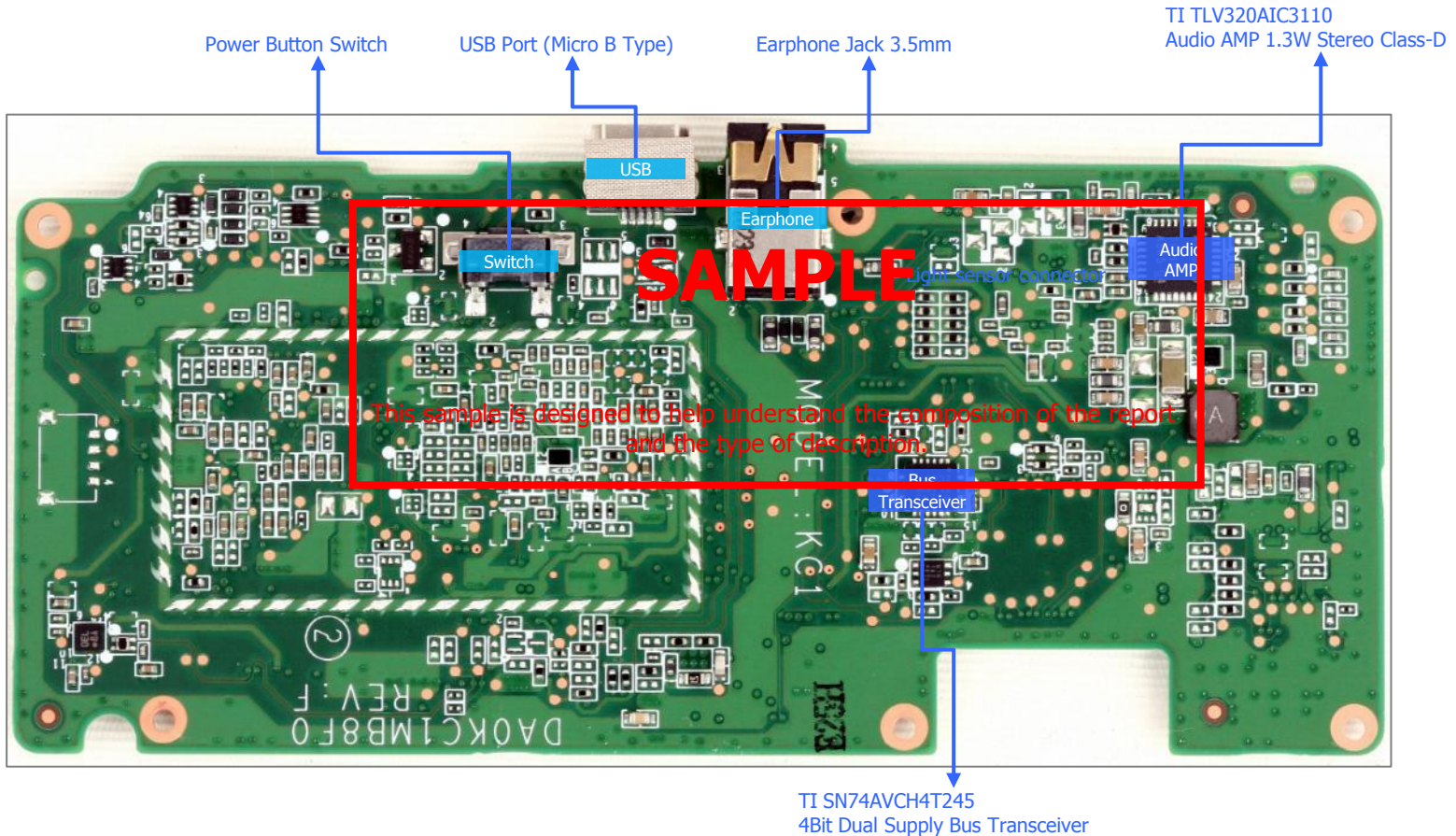
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Main Board

Bottom of PCB

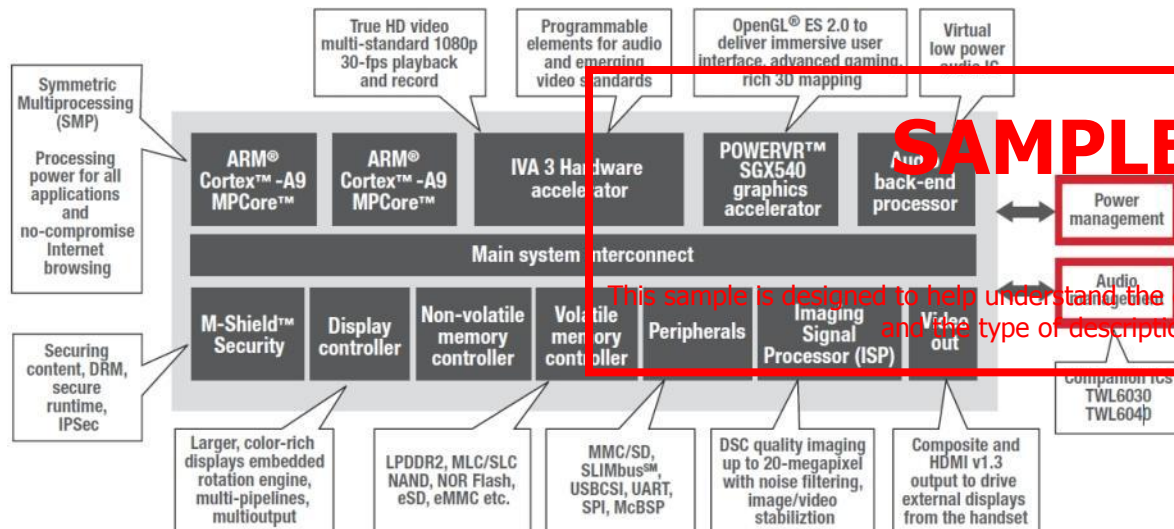
- Input/output ports, audio amp, and bus transceiver are located on the back of mainboard
- TI AIC3110 internally equipped with audio codec is applied to audio amp, TI's bus transceiver is applied
- A tact switch for power button is installed, Micro B type USB and earphone 3.5mm port are installed



Main Board

Major IC (CPU)

- OMAP4430 is internally equipped with GPU/Image Processor/Display Controller
- TI's OMAP platform is optimizedly designed to have a good compatibility with its own ICs (IC(PAM/Audio AMP/WLAN)
- Display maximum support resolution can support up to WUXGA (1920x1200)



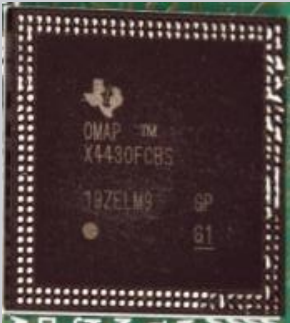
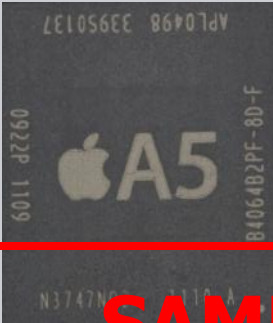
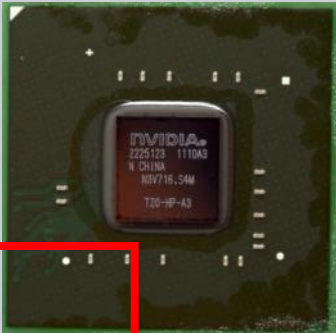
Block Diagram <OMAP 4430>

Feature

- Dual-core ARM Cortex-A9 MP Core SMP general-purpose processors for higher performance and efficiency
- IVA 3 Hardware accelerator
 - Delivers true 1080p multi-standard HD record and playback with the industry's broadest support for multimedia codecs available today as well as programmability to add support for future codecs
 - Provides support for high definition stereoscopic 3D encode/decode (OMAP4430: 720p, OMAP4460: 1080p)
- Image Signal Processor (ISP) for high-quality image and video capture, delivering digital SLR-like performance with 20 megapixel still image capture
- Imagination Technologies POWERVR™ SGX540 3D graphics core for stunning 3D user interfaces and high intensity 3D mobile gaming
- Audio back end (ABE) processor provides a virtual low power audio chip for significant power savings
- Flexible system support
 - Composite TV output
 - HDMI v1.3 output to drive HD Displays
 - WUXGA Display support
 - Peripheral interfaces: MIPI serial camera and serial Display interfaces, MIPI® SLIMbusSM, MMC/SD, USB 2.0 On-The-Go High Speed, UART, SPI, and more
- Support for leading mobile OSes: Microsoft Windows Mobile, Symbian and Linux (Android, Limo)
- 45-nm mobile process technology for improved performance and power efficiency
- Optimized power and audio management companion chips: TWL6030 and TWL6040

Main Board

CPU Comparison

	Amazon Kindle Fire	Apple iPad2	Samsung Galaxy Tab 10.1
Picture	 <p>TEXAS INSTRUMENTS OMAP TM X4430F08S</p>	 <p>APPLE A5 APL0498 339S0137</p>	 <p>NVIDIA 2225123 1110A3 N3V716.S4M T20-HP-A3</p>
Model	OMAP4430	A5	Tegra 2-250
Maker	Texas Instruments	APPLE	NVIDIA
CPU	Dual Core ARM Cortex A9	Dual Core ARM Cortex A9	Dual Core ARM Cortex A9
Package Type	POP	POP	SOC
Frequency	1 GHz,per core	1GHz dual-core	1 GHz
L2 Cache	1MB	1MB	1MB
L1 Cache	(32KB/32KB) per core	(32KB/32KB) per core	(32KB/32KB) per core
Memory Size	Up to 1GB	512MB	Up to 1GB
Feature size	45um	45um	40um
GPU	PowerVR SGX540	PowerVR SGX543mp2	ULP Geforce

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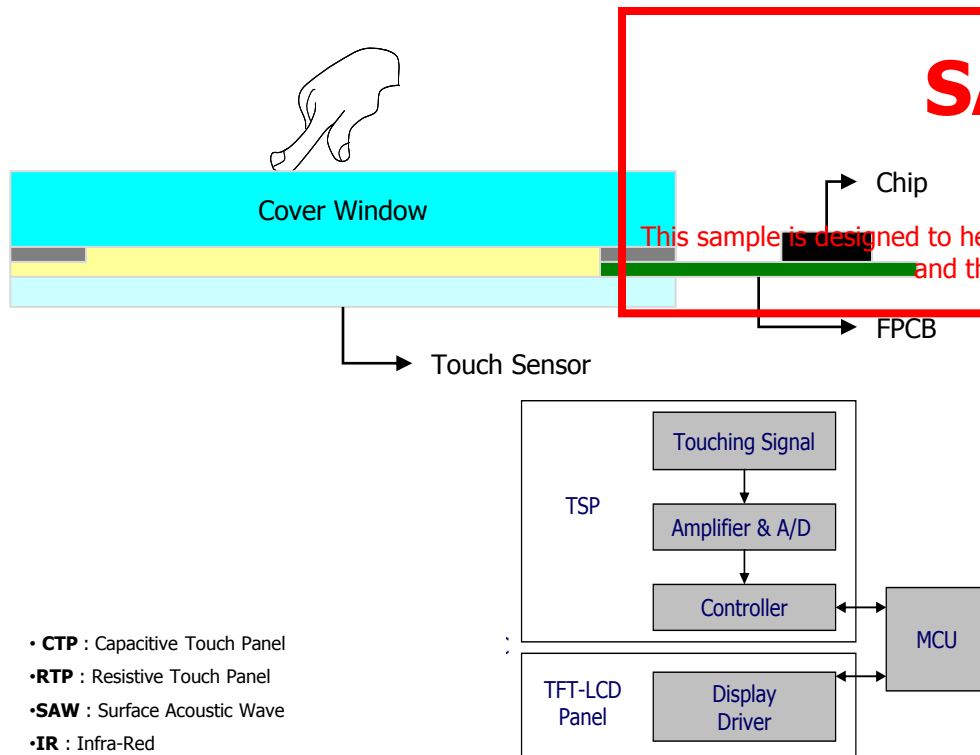
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TSP Trend

Basic TSP Structure and Classification by Driving Method

- TSP is composed of panel part and driving part (controller IC), panel part is composed of the touch sensor that ITO (Indium Tin Oxide) is deposited
- Electrode analog signal transmits to controller IC when touched by human's hand or an object, driver drives the display by receiving the digital signal coming from the controller IC

Touch Panel Structure (Capacitive Type)



Classification by Driving Method

Technology 1	Technology 2	Structure
Resistive	4-wire	Film/Glass
	5-wire	Film/Film/Plastic
	8-wire	Film/Film/Glass
	Digital	Glass/Glass
Capacitive	Analogue (Surface)	Glass
	Digital (Projected)	Film
		Glass/Film
SAW		Film/Film/Film
		Glass
IR/Optical		Plastic
		Glass
Others	APR	Plastic
	WIR	Glass
	EMR	Plastic

APR: Acoustic Pulse Recognition
WIR: Waveguide Infrared Rays
EMR: Electronic Magnetic Resonance

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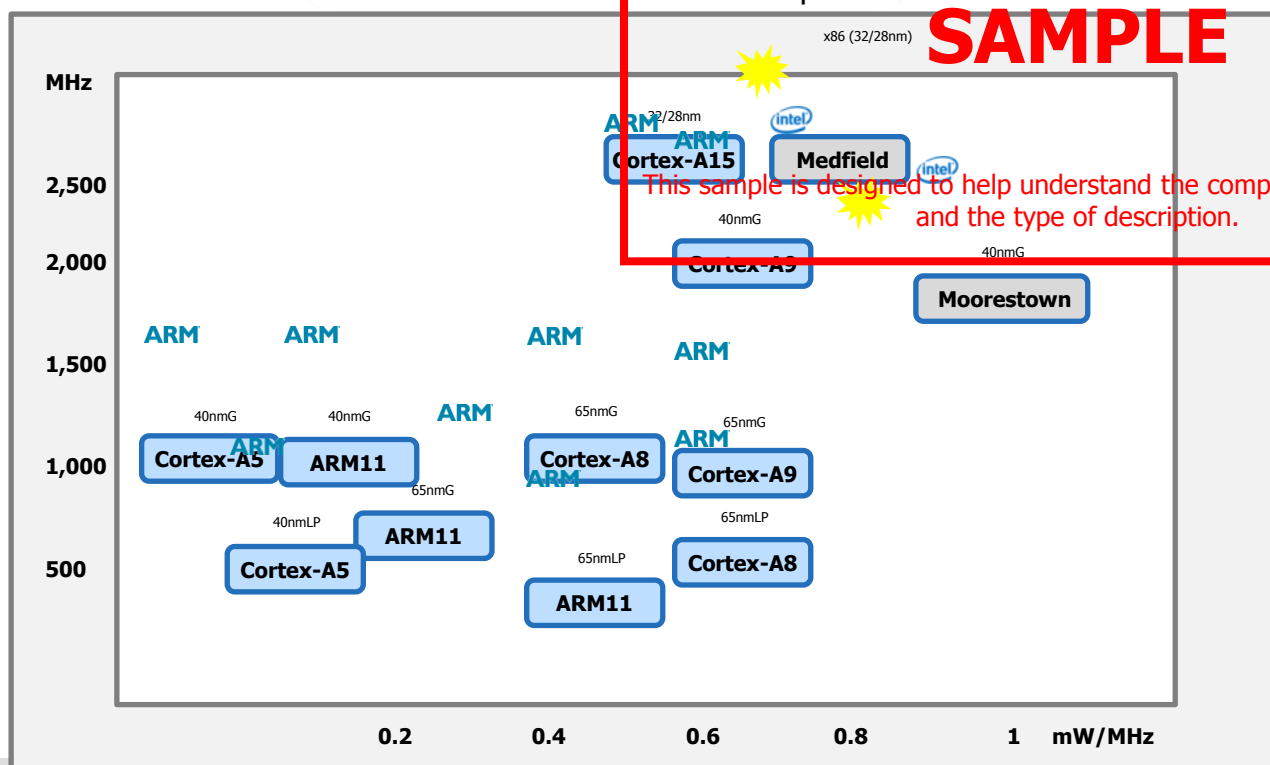
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CPU Trend

ARM Core

- ARM-based CPUs are applied to mobile products, ARM is the company to design the core architecture
- ARM-based CPU has strengths of fast speed and low power consumption that meet the level required to mobile devices (Accounts for about 95% market share in the mobile CPU market through the strengths such as increase in battery life, decrease in die size, alleviation of heat radiation, and etc. in the specifications that are required to mobile devices)
- Intel is developing Medfield and Moorestown to respond to ARM's Coretex, ARM is expected to enhance the targeting of Intel's market with the CPU equivalent to note PC level by releasing a 2.5GHz Core named Cortex-A15 in 2012. (Microsoft's Windows will also support ARM)

ARM Platform Product Line-up



[Support Features by Major ARM CPU]

- ARM9(ARMv5)
 - Android1.6, e-book, cartoon, music, moving picture (encoded)
- ARM11(ARMv6): <1,000MHz
 - Android2.2, e-book, cartoon, music, documentation, moving picture (not-encoded), 3D
- Cortex A8 (ARMv7): 500~1,000MHz
 - e-book, cartoon, music, documentation, moving picture(not-encoded), 3D
- Cortex A9 (ARMv7) : 1,000~2,000MHz
 - e-book, cartoon, music, documentation, moving picture(not-encoded), 3D

ARM Platform CPU Line-up

- 2012



This sample is designed to help understand the composition of the report and the type of description.

Contents Service

Amazon Service

- Provides diverse services based on a massive amount of contents of the world's largest internet bookstore/shopping mall, Amazon
- Small storage space (about 6GB) of hardware can be supplemented by the offer of cloud services. This service is considered to be a good marketing tool for the sales of contents

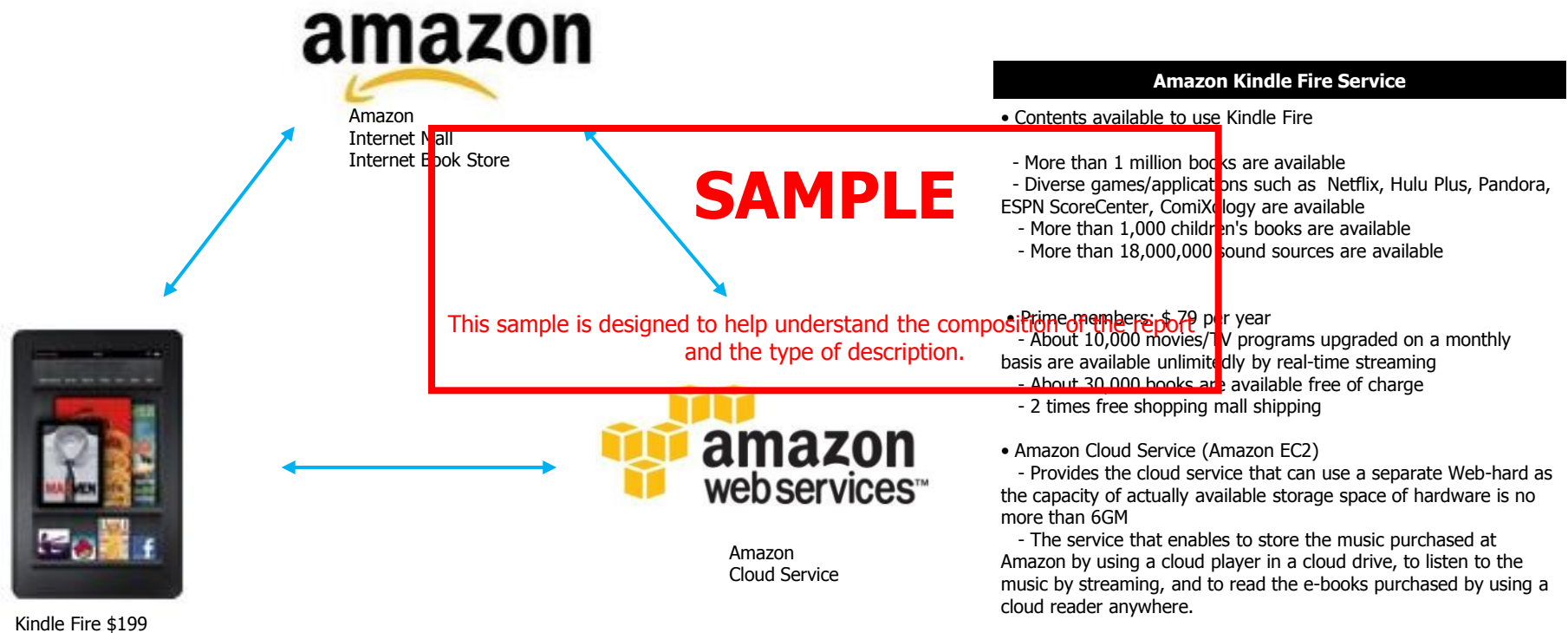


Table of Contents

- Overview
- Reverse Engineering
- Technical Issue
- **Cost Estimation & Major Supplier**
 - **Net Material Cost Estimation**
 - **Profit Estimation**
 - **Major Supplier**
- Appendix

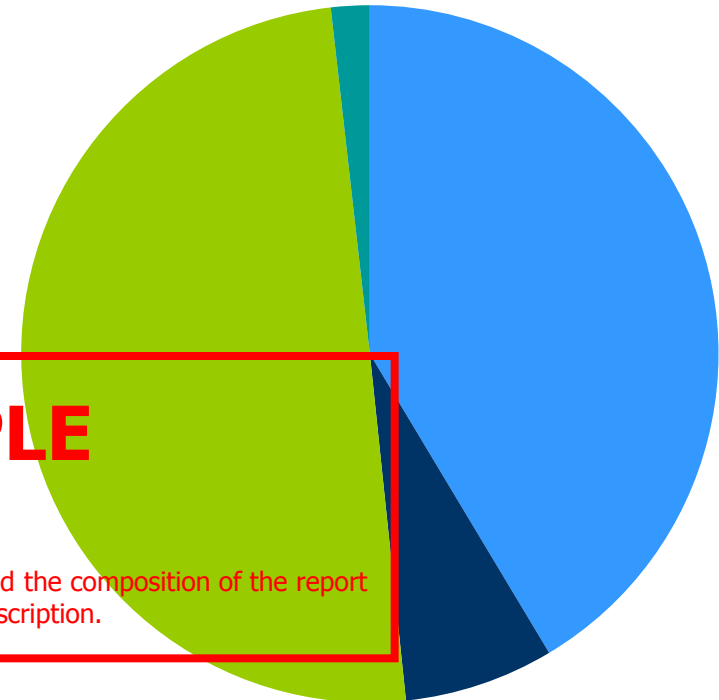
SAMPLE

This sample is designed to help understand the composition of the report and the type of description.

Net Material Cost Estimation

Total Material Cost

	Category	US\$	%
Display	Array Process		
	Cell Process		
	Module Process		
	Touch Screen Panel		
	OTHERS		
	Sub-Total		
MECHANICAL	Back		
	Bracket		
	Packing		
	Sub-Total		
CIRCUIT	Application Processor		
	Memory		
	Bluetooth/WLAN		
	User Interface		
	PM / Battery		
	Electro-Mechanical		
	Others		
	Sub-Total		
ETC	Charger		
	Manual		
	Sub-Total		
	Total		



- ✓ Total Cost of Kindle Fire is \$000.0
- ✓ Taking a look at part by part, display parts (TSP included), circuit parts, mechanical parts, and accessory & other parts account for 00.0%, 00.0%, 0.0%, and 0.0% respectively

* Array, cell, and module of display part add up the material cost and process cost following the order of a production process

Profit Estimation

Display & Touch Screen Panel

Category		US\$	%
Material	Array	Glass	
		Target	
		Chemical, Others	
		Array Sum	
		Array Yield(%)	
		Yielded Array Total	
	Cell	Color Filter	
		Liquid Crystal	
		Polarizer	
		Others	
		Cell Sum	
		Cell Yield(%)	
	Yielded Cell Total		
	Module	BLU	
		Driver IC	
		PCB,Others	
		Module Sum	
		Module Yield(%)	
Yielded Module Total			
Sub-Total			
Processing	Labor Costs		
	Depreciation Cost		
	O/H,R&D		
	Sub-Total		
Total Manufacturing Cost			
SG&A(5%)			
Total Cost			
Module Price			
Profit			
Profit Ratio(%)			

Category		US\$	%
Material Cost	Front Cover Glass		
	Glass		
	Insulator		
	ITO		
	Touch Controller		
	Others		
	Sub-Total		
Processing Cost			
Total Manufacturing Cost			
SG&A(3%)			
Total Cost			
Module Price			
Profit			
Profit Ratio(%)			

This sample is designed to help understand the composition of the report and the type of description.

* Array, cell, and module of display part add up the material cost and process cost following the order of a production process

Profit Estimation

SET Profit Estimation

		US\$	%
Manufacturing	Display Parts		
	Circuit Parts		
	Mechanical Parts		
	Etc.(Accessory) Parts		
	Net Material Cost		
	Etc.(CKD Pack+Tax+Freight+Loss+H/C)		
	Total Material Cost		
	Manufacturing O/H		
	Total Manufacturing Cost		
	Manufacturer Margin		
	FOB		
	Freight + Insurance + Handling & Land		
	CIF/CNF		
Distribution	Distribution O/H		
	Duty/Procedure		
	Distribution Margin		
	EX-HUB		
Marketing	Marketing O/H		
	Marketing Margin		
	Net Dealer Price		
	Sales Deduction		
	Average Dealer Price		
	Dealer Margin		
	Average Retail Price		
Consolidated Brand Profit (Brand Total)			

SAMPLE

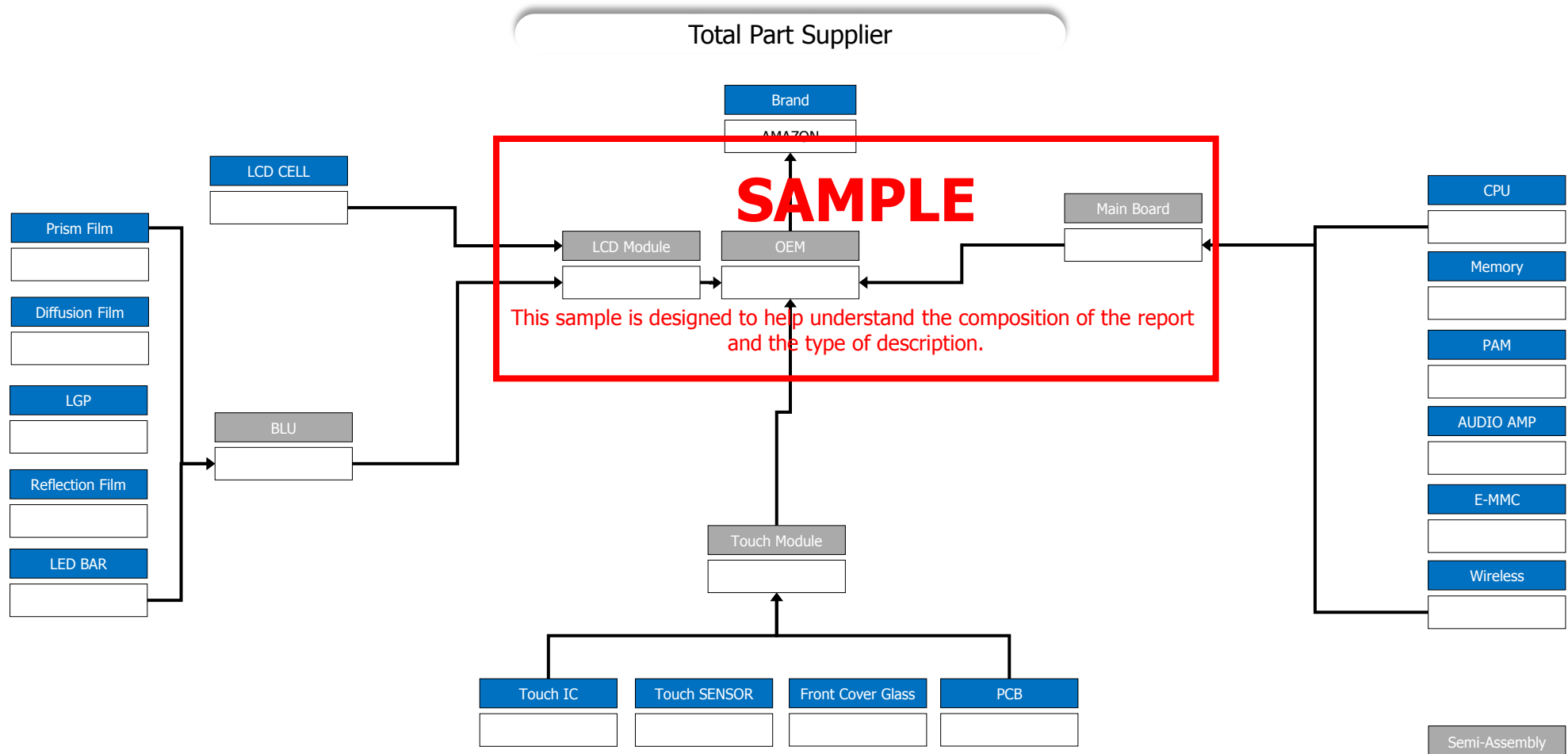
This sample is designed to help understand the composition of the report and the type of description.

- An OEM manufacture, Quanta, is analyzed to make a manufacturer margin of about *%
- As a result of profit estimation based on released time, Kindle Fire is **. *% based on Linkage profit/loss
- However, Amazon is considered to target the profits through the sales of contents such as book/music/magazine and etc. at its own stores and through the products purchase inducement that Amazon sells rather than the hardware sales profit through Kindle Fire

Major Supplier

Total Supply Chain Map

- LCD module suppliers are *** and ***, touch screen panels are supplied from ***
- Applies Texas Instruments' products to CPU, and also uses Texas Instruments' products to PMIC and Audio
- OEM production is carried out by Quanta and supplied to Amazon



SAMPLE

This sample is designed to help understand the composition of the report and the type of description.

Amazon Tablet PC Kindle Fire, Structure and Cost Analysis

End of Report



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 - **Circuit**
 - **Display**
 - **Major Parts**

SAMPLE

This sample is designed to help understand the composition of the report and the type of description.

Mechanical – Package



Mechanical – Package



Mechanical – Front/Back



SAMPLE

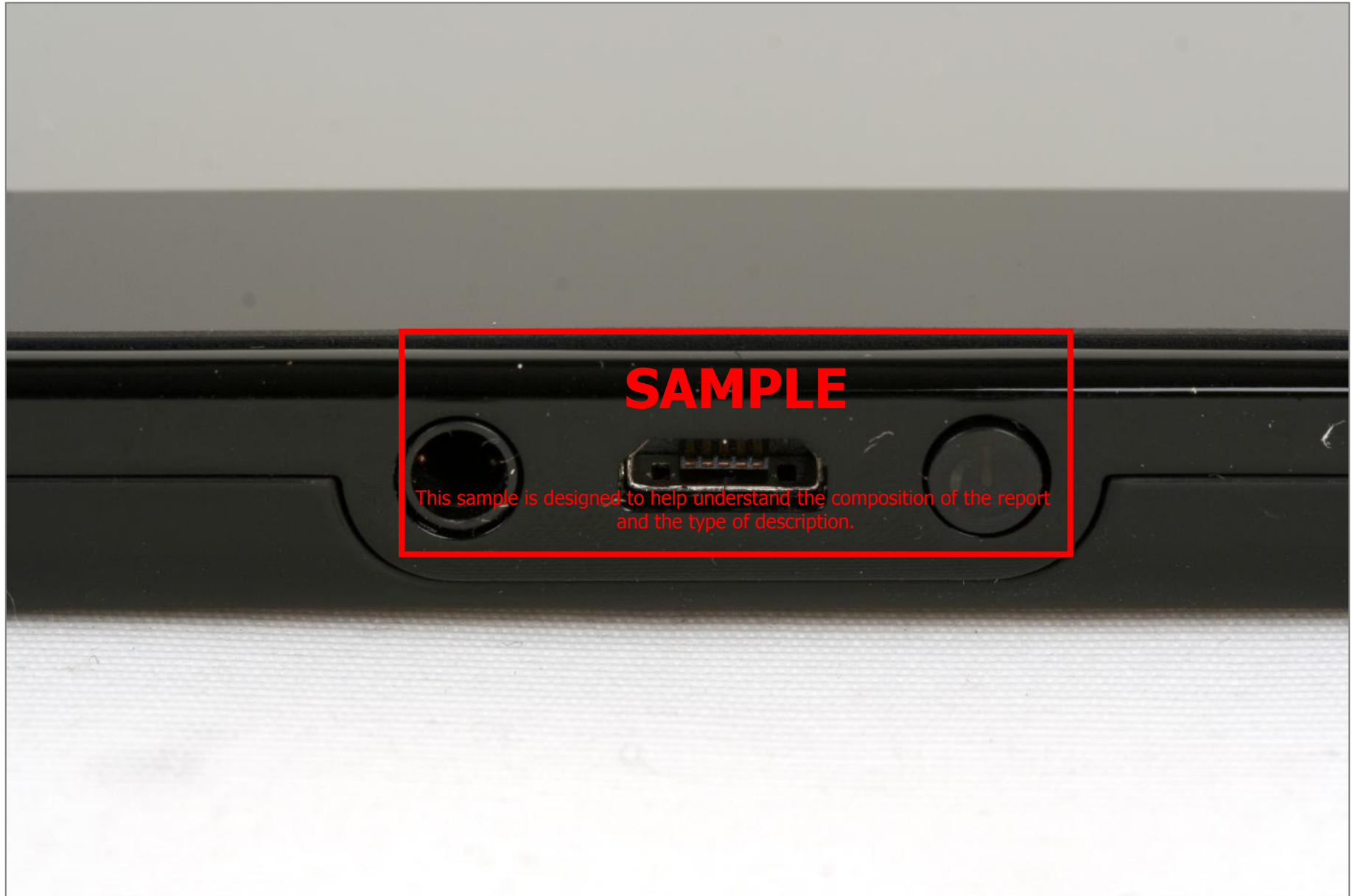
This sample is designed to help understand the composition of the report and the type of description.



Mechanical – Front (Illuminance sensor)



Mechanical – Bottom (Earphone, USB Connector, Power BTN)



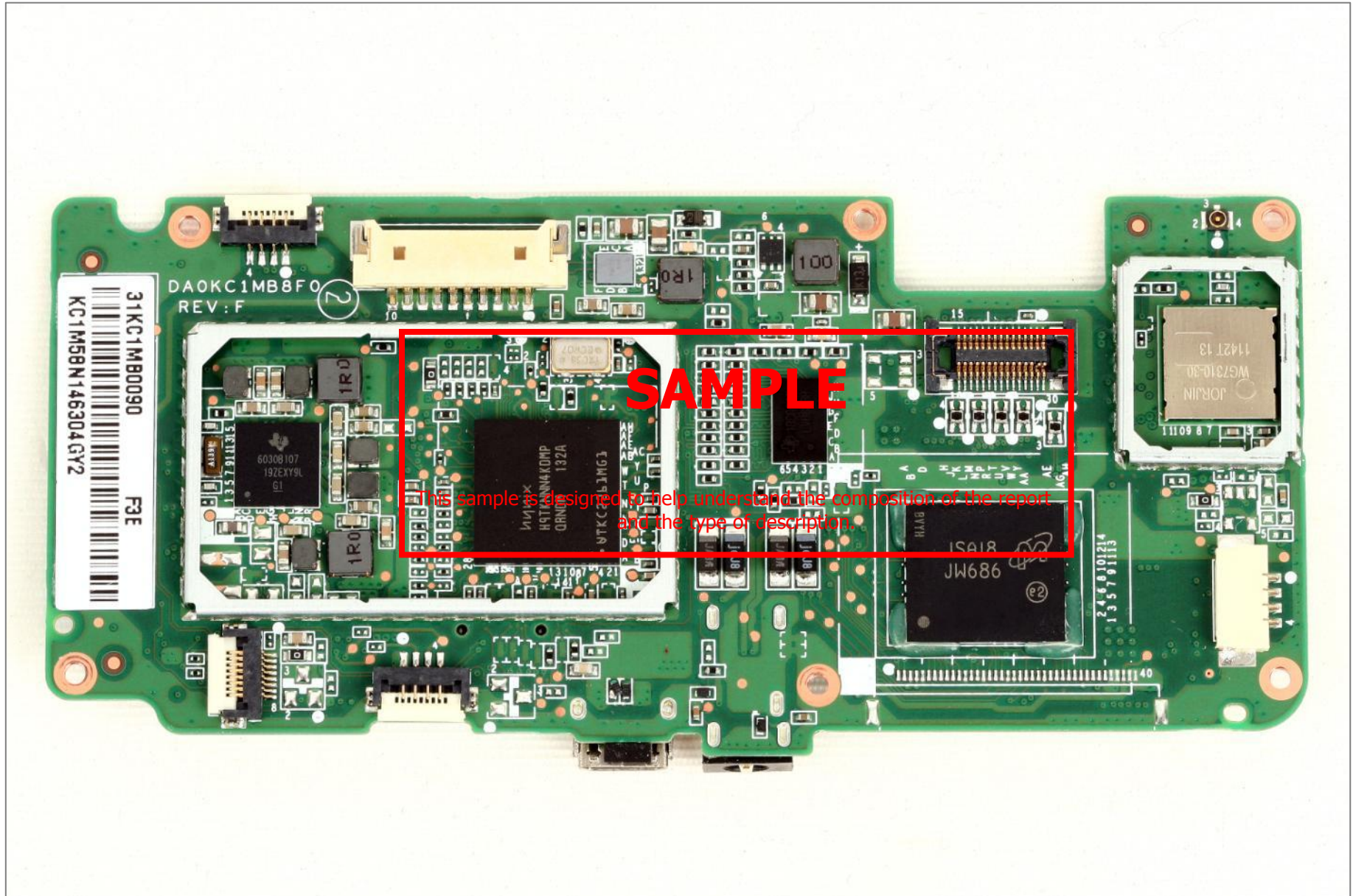
Mechanical – Back Cover



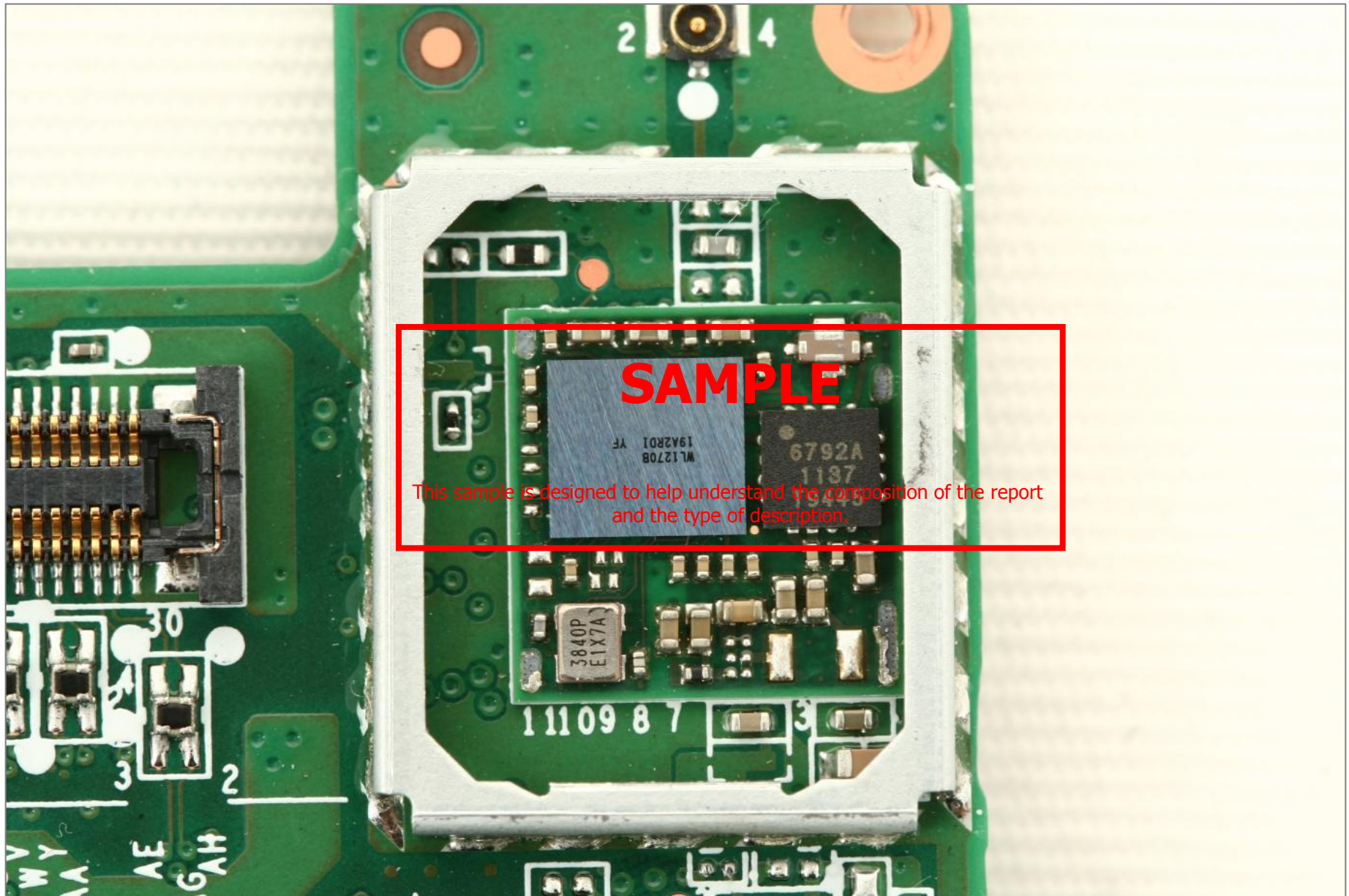
鋰離子電池組/锂离子电池组 / Li-ION Polymer Battery Pack
 電壓/电压 3.7 V 容量 4400mAh/15.28Wh
 WTE P/N: E33U1
 型號/Model No: J1 01
CAUTION
 Danger of explosion: Battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions. Never attempt to disassemble or reassemble. Do not dispose of in fire or directly short circuit.
 注意: 用錯誤型號電池更換會有爆炸危險, 請參閱說明書
 CE
 Li-ion 20
 NOT USER SERVICEABLE
 Cell made in China
 Pack processed in China
 THMAHA2122200411378QH
 KC1SAE11111107
 3UKCISA0000

This sample is designed to understand the composition of the report

Circuit – Mainboard (Front)



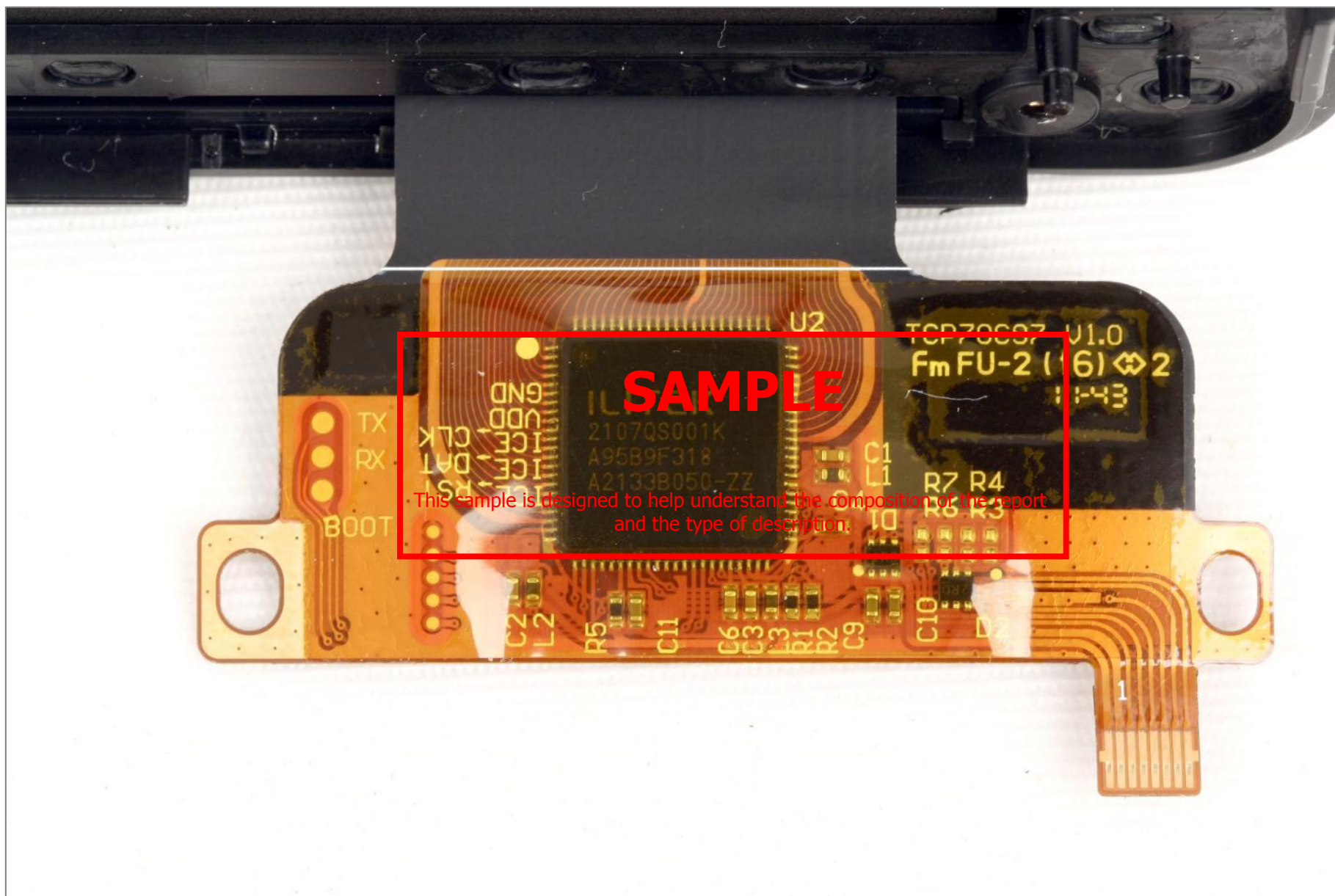
Circuit – Mainboard (RF Module)



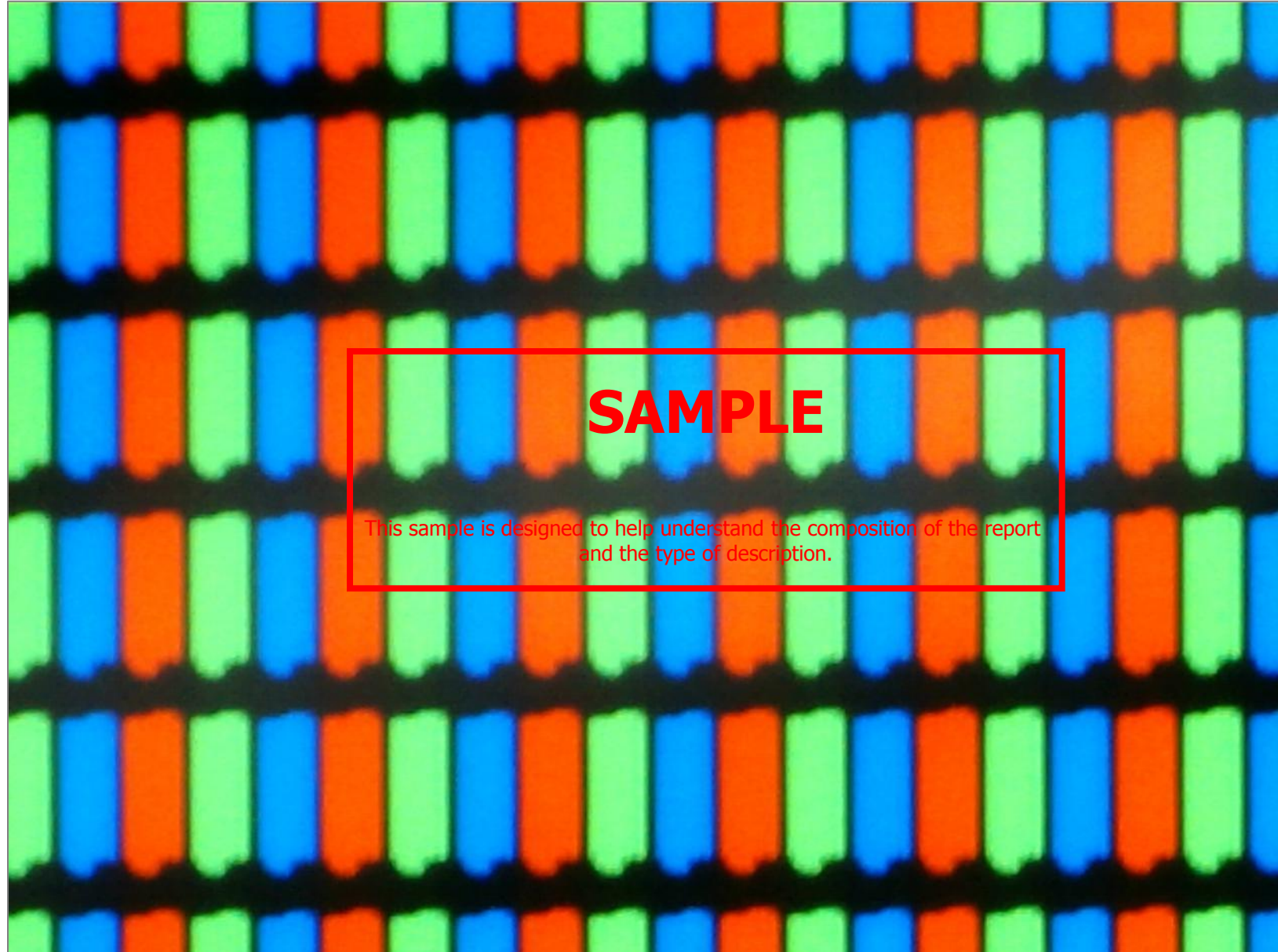
Display – Touch Screen Panel & LCD Module



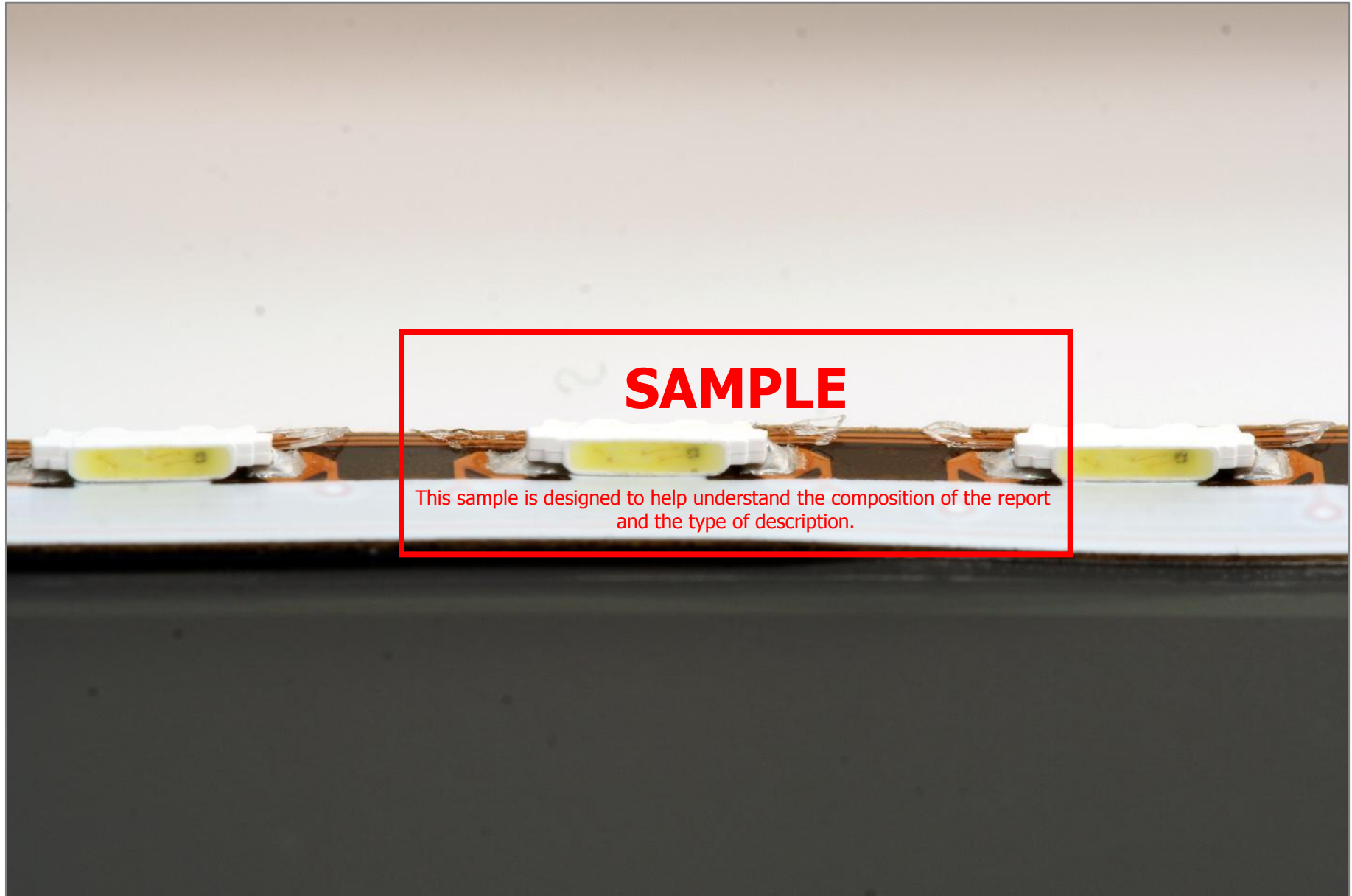
Display – Touch Screen Driving part



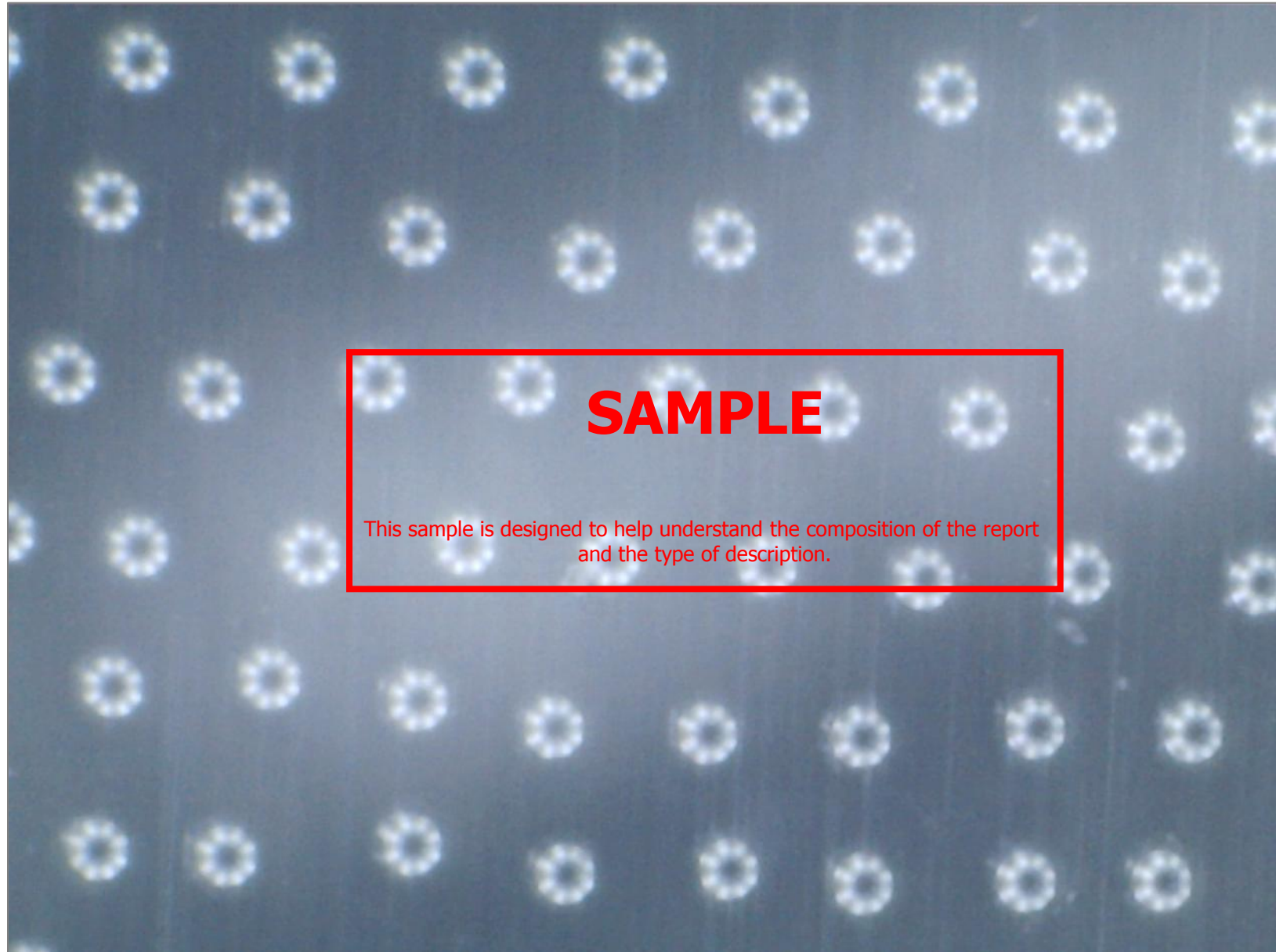
Display – LCD Module (Cell)



Display – BLU (LED Bar & Package)



Display – BLU (Light Guide Plate Pattern)



Display – BLU (Light Guide Plate)

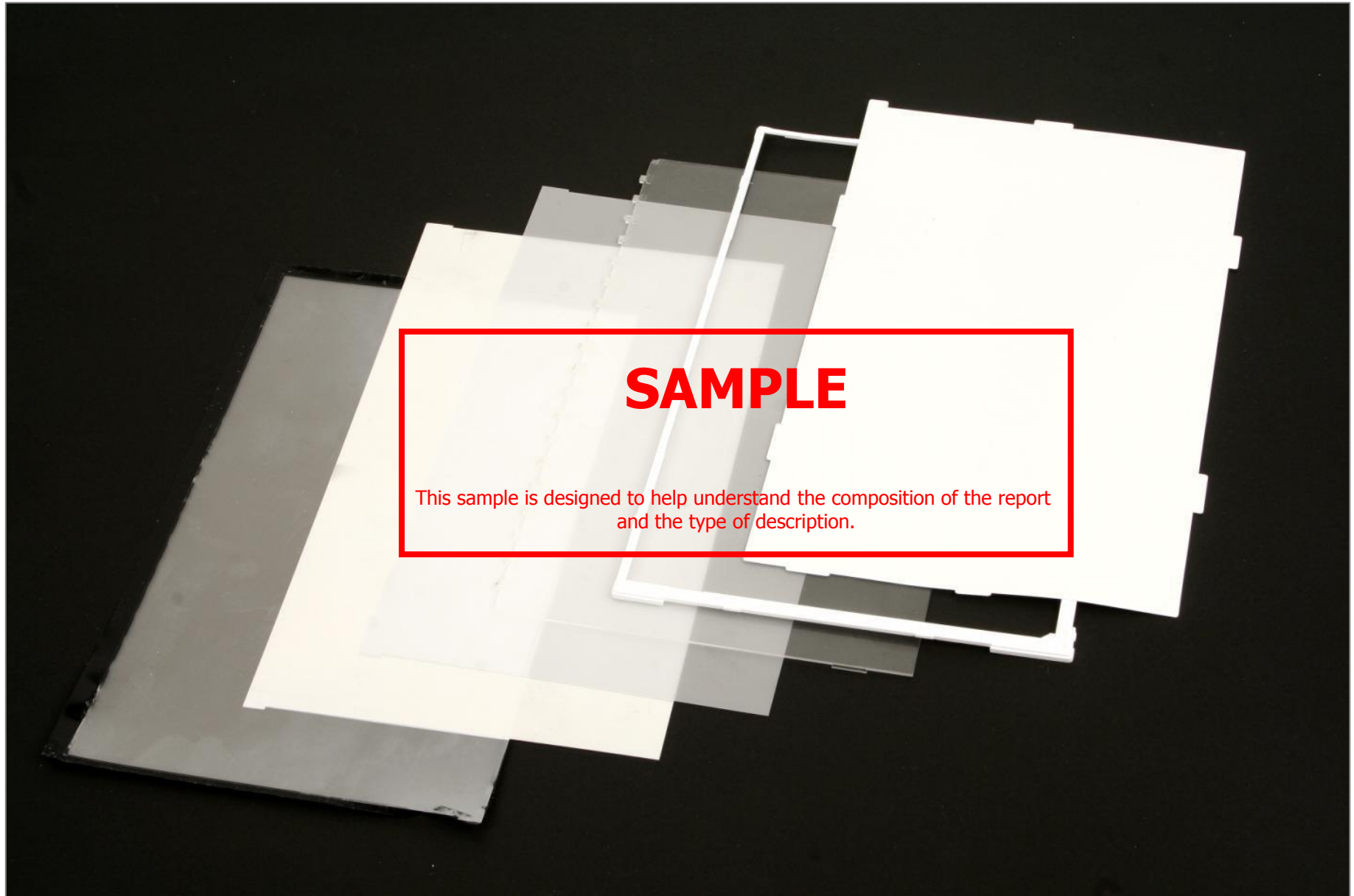


Display – BLU (Prism Film #2, Back)

SAMPLE

This sample is designed to help understand the composition of the report
and the type of description.

Display – BLU (Optical Films)



Kindle Fire – Overview



Major Supplier

LG Display

Date of Establishment	• 1985.02.28
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Capital Stock • (mil) \$ 9,733.8

Location of Headquarter	• Seoul
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No. of Employees • 2010 Employees 46,705

Main Product	<ul style="list-style-type: none">• TFT-LCD• OLED• Flexible Display• Note PC• Television• Application Products
---------------------	---

Affiliates

- Suzhou Raken Technology Ltd, Guangzhou New Vision Technology Research and Development Limited, Global OLED Technology LLC, Paju Electronic Glass Co., Ltd, TLi Inc, New Optics Ltd., LIG ADP Co., Ltd, Wooree LED Co Ltd., Dynamic Solar Design Co., Ltd., RPO Inc, LB Gemini No. 16 New Growth Fund, Can Yang Investments Limited, YAS Co., Ltd., Eralite Optoelectronics(Jiangsu) co, Ltd,

2011 3Q Revenue • (mil) \$ 16,074

2011 3Q Profit • (mil) \$

2010 Revenue • (mil) \$ 22,501.2

2010 Profit • (mil) \$ 3,290.4

[Asia]

- Tokyo branch
- China Nanjing branch
- China Shanghai branch
- China Guangzhou branch
- China Shenzhen branch
- China Xiamen branch
- China Puching branch
- China Yantai branch

[America]

- Austin branch
- Houston branch
- LA branch
- Service Center

Local Corporates

[Europe, Middle East]

- Finland branch
- European Corporate
- Turkey branch
- Poland branch
- Germany branch

Web Site • www.lgDisplay.com

SAMPLE

This sample is designed to help understand the composition of the report and the type of description.

Reverse Engineering Reports

[Tablet PC & Smart phone]

- BARNES & NOBLE 7" Tablet PC NOOK Color Structure and Cost Analysis
- Apple iPad 2 Structure and Cost Analysis
- Apple iPad 1 Structure and Cost Analysis
- Motorola 10.1" Tablet PC XOOM Structure and Cost Analysis
- Samsung 7" Tablet PC Galaxy Tab Structure and Cost Analysis
- Apple iPhone 4 Structure and Cost Analysis
- Samsung 10.1" Tablet PC Galaxy Tab Structure and Cost Analysis
- Apple iPhone 4S Structure and Cost Analysis
- Amazon Kindle Fire Structure and Cost Analysis

[TV]

- Samsung 3D Smart LED TV UN46D7000LF Structure and Cost Analysis
- LG Electronics FPR 3D LED TV 47LW5700 Structure and Cost Analysis
- Toshiba Non-Glasses 3D LED TV 20GL1 Structure and Cost Analysis
- LGE 15LE9500 vs. SONY XEL-1 Structure and Cost Analysis Comparison
- 3D TV Structure and Cost Analysis Comparison of 3 Major TV Makers
- LG Electronics 3D TV '47LX6500' Structure and Cost Analysis
- Sony 3D TV 46" KDL-46NX710 Structure and Cost Analysis
- Samsung 3D LED TV UN46C7000WF Structure and Cost Analysis

[Monitor]

- BenQ 18.5"/21.5" LED Monitor GL930/GL2230 Structure and Cost Analysis
- LG Electronics 23" LED Monitor E2350V-PN Structure and Cost Analysis

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About Displaybank - Global Operations

- Global leader in Display industry research and consulting services
- With over 10 years of industry-wide research experience, Displaybank provides market intelligence as well as technical research to industry leaders
- Besides end-user market, especially strong in the Component/Material research that is basis of the overall Display industry
- Headquartered in Korea, the region known as the leader in Display industry, Displaybank operates regional offices in Japan, China, Taiwan and the US.



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{ Covering Entire Sectors of Display Industry }

